

# Epilog: A General Framework for Understanding Attitude Change Processes

# 9

You have now read about the major approaches developed by psychologists to study attitudes and persuasion. Each of these approaches was at one time or another thought possibly to provide a very general explanation for why peoples' attitudes change. Because proponents of each approach attempted to explain a wide variety of phenomena, the different approaches often provided *competing* interpretations for the results of a particular experiment. Interestingly, research designed to allow a choice between two different ways to explain some data (crucial experiments) has not led to any of the approaches being abandoned. Instead, the domains of the different approaches have been narrowed. We now know, for example, that rewards do not always increase persuasion and that all changes in attitudes are not based on a consistency motive but that each of these processes applies in some situations.

Fortunately, the failure of one generally accepted approach to attitudes and persuasion to emerge over the last several decades has not inhibited the growth of a significant body of knowledge about attitude change processes. All of the approaches that we have described in this book have contributed significantly to this body of knowledge. Our goal in this chapter is to outline a general framework for thinking about attitude change processes that incorporates many of the major concepts discussed in the previous chapters of this book. As such, the framework takes one step toward a general theory of attitude change.

## Central versus Peripheral Routes to Attitude Change

Even though all of the different approaches discussed in the previous chapters have different names, different postulates, and particular "effects" that they specialize in explaining, these different approaches can really be thought of as emphasizing two distinct routes to attitude change. The first route, which we call the *central route*, emphasizes the information that a person has about the attitude object or issue under consideration. Some of these central approaches focus on how the arguments in a persuasive message are comprehended and learned (see chap. 3); other central approaches focus on the information that people generate

themselves (see chap. 8); still other central approaches focus on the ways in which people integrate or combine the information available to them (see chap. 7). The view of the persuasion process that emerges from these approaches appears to be a very rational one. The message recipient attends to the message arguments, attempts to understand them, and then evaluates them. Some arguments lead to favorable thoughts, whereas others lead to counterarguments. The person then integrates all of this information into a coherent and reasoned position. Of course the process is not completely objective and/or logical, because what is a good argument to one person may be a bad one to another. But for the most part, under the central route, persuasion is based on a thoughtful consideration of the object or issue at hand.

The second route to attitude change, which we call the *peripheral route*, presents a very different picture of the persuasion process. According to this second view, attitude change is determined by such factors as the rewards or punishments with which the message is associated (see chap. 2), or the judgmental distortions that take place in perceiving the message (see chap. 4), or the simple inferences that a person draws about why a speaker advocated a certain position (see chap. 6). The picture that these peripheral approaches paint of the persuasion process is not a very thoughtful one. If a message is associated with a pleasant smell or an attractive source, it is accepted. If the message takes a position that is too discrepant, it is rejected regardless of the cogency of the arguments presented. People "observe" their own behaviors or physiological responses and infer what their attitudes "must" be.<sup>1</sup>

It is very important to note that the difference between the central and peripheral routes to attitude change is not that the former *actually is* rational and logical whereas the latter is not. We have already noted that the favorable thoughts and counterarguments that a person generates in response to a message need not be logical or rational at all. They only have to make sense to the person who generates them (i.e., they are psycho-logical or psycho-rational). Likewise, it may be perfectly logical and rational in some situations to like things that lead to rewards or to agree with someone simply because of that person's greater expertise on an issue.

The difference between the two routes has to do with the extent to which the attitude change that results from a message is due to active thinking about either the issue or the object-relevant information provided by the message. According to the central view, thinking about issue-relevant information is the most direct determinant of the direction and amount of attitude change produced. On the other hand, according to the peripheral view, attitude change is the result of peripheral "*persuasion cues*." Persuasion cues are factors or motives inherent in the persuasion setting that are sufficient to produce an initial attitude change *without any active thinking about the attributes of the issue or the object under consideration*. These cues (like a very attractive source or the ability to obtain a reward) allow a person to evaluate a communication or decide what attitudinal position to adopt without engaging in any extensive cognitive work relevant to the issue under consideration.<sup>2</sup>

Given that there are two basic routes to attitude change, the important questions become: (1) What determines whether the central or the peripheral route will be taken? (2) What are the consequences of each route? (3) How do the traditional approaches to persuasion relate to these routes? Before presenting a model that addresses these questions, let's first briefly examine some research that suggests that these two routes are important.

## Anticipatory Attitude Changes

An anticipatory attitude change is one that occurs when a person expects, but has not yet received, a persuasive message. The accumulated research on anticipatory changes indicates that people sometimes become more extreme in their attitudes prior to the receipt of a message, and they sometimes become less extreme. It further appears that whether or not a person becomes more or less extreme depends upon how personally involving the topic of the impending message is to the person. When people expect to receive a message on an issue that is not very personally relevant, attitudes generally become more moderate, but when people expect to receive a message on an issue that has high personal relevance, attitudes become more extreme (see Cialdini and Petty, 1981, for a review of these studies).<sup>3</sup>

Let's briefly examine one study that found evidence for both types of anticipatory changes within one experiment (Cialdini, Levy, Herman, Kozlowski, & Petty, 1976). In the relevant conditions of this study, Cialdini et al. led their college student subjects to believe that, as part of the experiment, they were soon going to discuss a campus issue with another student who took a position opposite to their own. The issue to be discussed was either one that was personally important to the students (e.g., dividing their university into separate graduate and undergraduate campuses next year), or one that would have no personally relevant effects (dividing the university into two campuses in six years). While waiting for the discussion to begin, subjects were asked to list their thoughts about the issue, and they then completed four semantic differential scales assessing their attitudes on the issue. When the issue to be discussed was personally relevant, subjects reported more *polarized* attitudes (more extreme in the direction of their initial tendency) than control subjects (i.e., students on the same side of the issue as the experimental subjects but who did not expect to discuss the issue); and they listed more thoughts in support of their attitudes than did control subjects. On the other hand, when the issue to be discussed was not personally relevant, subjects reported more *moderate* attitudes than controls, and these subjects did not differ from controls in the number of supportive thoughts listed.

Why does one group polarize whereas the other moderates in anticipation of receiving a counterattitudinal message from another person? Cialdini et al. suggested that different motives are operating in the two situations. When the

impending discussion is on a topic of low personal importance, the dominant motive of recipients is one of *impression management* (presenting a favorable image to others; recall our discussion of this motive in chap. 5). A moderate position on the topic is adopted because it is easier to defend and/or gives the appearance of open- and broad-mindedness (see also Cialdini et al., 1973; Hass, 1975; and Hass & Mann, 1976). Adopting an attitudinal position for this reason does not require thinking about the merits of the issue. On the other hand, when the impending discussion is on a topic of considerable personal importance, people are more concerned with defending their *true* positions than with creating favorable impressions of themselves. Preparing to defend one's position *does* require issue-relevant thinking. The subjects who polarized therefore followed a central route to attitude change (because the changes were accompanied by issue-relevant thinking), but the subjects who moderated followed a peripheral route to attitude change (because the changes resulted from concerns about non-issue relevant matters).

An interesting feature of the Cialdini et al. (1976) study is that after the subjects' initial anticipatory shifts were monitored, all of the subjects were told that they would *not* be engaging in a discussion on the issue after all. The subjects had only to complete a final attitude scale. On this second measure of attitudes, taken after the expectation of discussion had been cancelled, an intriguing result was obtained. The subjects who had initially polarized in anticipation of discussion (high-involvement subjects) remained polarized relative to controls, but the subjects who had moderated in anticipation of discussion (low-involvement subjects) were no longer any more moderate than controls. These subjects had returned to their original attitude positions. These data suggest one important consequence of the different routes to attitude change: that the central route produces more *permanent* changes than does the peripheral route.

### The Relative Importance of Source and Message Factors in Persuasion

In the research on anticipatory shifts, subjects are never actually exposed to a persuasive communication. Nevertheless, when the issue about to be discussed is highly involving, issue-relevant concerns mediate the attitude changes observed. But when the issue about to be discussed is not very involving, features of the persuasion situation that are irrelevant to the issue are responsible for the attitude changes. These same effects can be observed in the more common attitude change situation in which a persuasive message is presented to subjects.

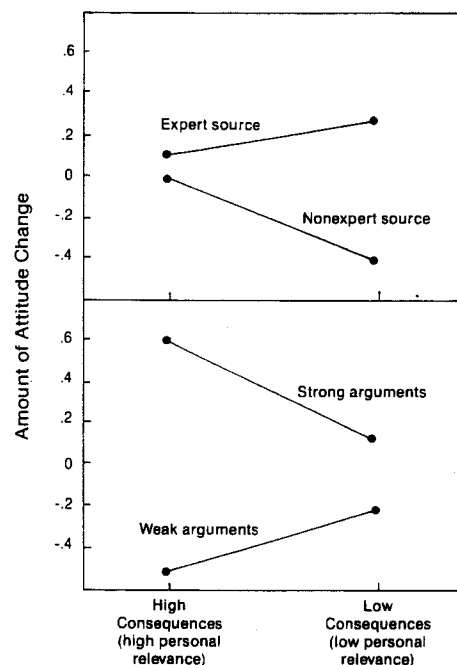
Petty, Cacioppo, and Goldman (in press) had college students listen to a communication advocating that seniors be required to take a comprehensive exam in their major prior to graduation. Three variables were manipulated in this study: (1) *personal consequences*—for half of the subjects the speaker advocated that the policy begin next year (high consequences), and for half the

speaker advocated that the policy take effect in ten years (low consequences); (2) *message arguments*—for half of the subjects the message contained eight highly persuasive arguments (strong), and for half the message contained eight specious arguments (weak); and (3) *source expertise*—for half of the subjects the source was described as a professor of education at Princeton University (expert source), and for half the source was described as a junior at a local high school (nonexpert source). The attitude data from this study are presented in figure 9.1. Under high-consequences conditions, subjects' attitudes about comprehensive exams were determined primarily by the nature of the issue-relevant arguments in the message. Strong arguments produced significantly more attitude change than weak ones; the expertise of the source had no significant influence. On the other hand, under low-consequences conditions, attitudes were determined primarily by source expertise; the quality of the arguments presented had little effect. Just as in the anticipatory attitude change research, where no persuasive message is actually delivered (Cialdini et al., 1976), the primary determinant of attitude change when a persuasive communication is presented depends on whether the issue under consideration is of high or low personal relevance. Under high relevance, factors central to the issue are more important; under low relevance, peripheral factors become more potent.

Chaiken (1980) has obtained data relevant to the persistence of attitude changes induced under different source and message characteristics. In her study, college students read a persuasive message on one of two topics (e.g., changing the university calendar from a two-semester to a trimester system). Three variables were manipulated: (1) *personal consequences*—half of the subjects thought that they were going to be interviewed about the issue that they had read about (high consequences), and half thought that they would be interviewed about a different issue (low consequences); (2) *message arguments*—half of the subjects received a message containing six cogent arguments, and half received a message containing two cogent arguments (randomly selected from the six); and (3) *source likability*—half of the subjects read that the communicator had insulted students at their university (unlikable source), and half read that the communicator had complimented students at their university (likable source). The attitude data for this study (for the two issues combined) are graphed in figure 9.2. In the high-consequences conditions, subjects' attitudes were determined primarily by the number of issue-relevant arguments in the message; the likability of the source had no significant effect. Under low-consequences conditions, however, attitudes were determined primarily by source likability; the number of arguments presented had no significant effect. In addition to the initial measure of attitude, though, Chaiken took a second measure about ten days later. Although there was a trend for all subjects to show less persuasion on the second testing, the decay in attitude change was *less* for high-consequences subjects (whose initial attitude changes were based primarily on their responses to the issue-relevant arguments) than for low-consequences subjects (whose initial attitude changes were based primarily on their responses to the characteristics of the source).

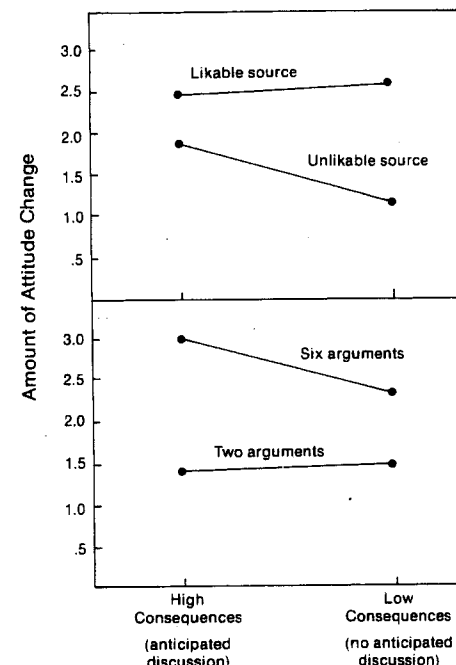
**Figure 9.1**

*Top panel:* Attitude change as a function of source expertise and perceived consequences. *Bottom panel:* Attitude change as a function of argument quality and perceived consequences. (Adapted from Petty, Cacioppo, & Goldman, in press. Copyright by the American Psychological Association. Used with permission.)



**Figure 9.2**

*Top panel:* Attitude change as a function of source likability and perceived consequences. *Bottom panel:* Attitude change as a function of number of arguments and perceived consequences. (Adapted from Chaiken (1980). Copyright by the American Psychological Association. Used with permission.)



## The Relative Importance of Recipient and Message Factors in Persuasion

We have just seen that people will generally be more motivated to think about issues that are highly involving, and that their motivation to think about an issue can be increased if they expect to be interviewed about the topic. There is some evidence that, all else being equal, people are more motivated to think about messages taking counterattitudinal positions than about messages taking proattitudinal positions. For example, in their study on message repetition (discussed in chap. 8, fig. 8.4), Cacioppo and Petty (1979b) exposed subjects to the same arguments in support of either a counter- or a proattitudinal position. Subjects generated more issue-relevant thoughts when the arguments were used to support

the counter- rather than the proattitudinal position. Also, after the message, subjects were able to recall more of the message arguments when they were used to support the counter- rather than the proattitudinal position. This is what would be expected if the counterattitudinal arguments elicited greater thinking (Craig & Lockhart, 1972). Counterattitudinal arguments probably elicit greater scrutiny than proattitudinal ones because the consequences of accepting them are greater.

Cacioppo and Petty (1980b) used this reasoning to test a hypothesis about when sex differences would emerge in attitude change research. Based on Sistrunk and McDavid's (1972) study (discussed in chap. 3), there is now widespread agreement that the sex differences observed in most investigations (women being

easier to persuade than men) have been due to the fact that women were less familiar with the issue under consideration than men were. When men are less familiar with the issue than women, however, men are easier to persuade. Does this mean that explanations of the sex difference based on the social roles of men and women (i.e., that women are socialized to be cooperative and men to be independent; Eagly, 1978; Eagly, Wood, & Fishbaugh, in press) are never responsible for persuasion differences between men and women? Cacioppo and Petty (1980b) hypothesized that if a sex difference due to a person's social role were to be found, it would most likely be observed in situations that have few important consequences for the person (as when a message takes an agreeable position). But when consequences are high (as when a message takes a disagreeable position), attitude change should be determined more by the person's ability to react to the issue-relevant information provided than by one's social role.

To test this hypothesis, two kinds of stimuli were developed—pictures of current fashions and pictures of football tackles. Preliminary work indicated that women were more familiar with and had more knowledge about the former stimuli, whereas men were more familiar with and had more knowledge about the latter. In the high-consequences conditions, the subjects were exposed to the statements of others about the fashions and tackles that were *inaccurate*. In this case, the subjects would be motivated to defend their own views of reality, and agreement would depend on the subjects' ability to defend their own opinions. It was expected—and found—that, under the high-consequences conditions, men agreed more with the inaccurate opinions of others on the fashions but that women agreed more with the inaccurate opinions of others on the football tackles. In the low-consequences conditions, the subjects were exposed to the *accurate* statements of others about fashions and football tackles. In this case, there is no need to defend one's own view, and it was hypothesized that agreement would be determined more by the person's social role (something clearly peripheral to the issue under consideration). Under the low-consequences conditions, women agreed more with the opinions of the others than men did for both the fashion and the football pictures. It appears that the female role to be cooperative and/or the male role to be independent is most likely to affect the extent of influence when the personal consequences of agreement are low. When the consequences of agreement are increased, the extent of influence is determined more by the person's ability to process the issue-relevant information presented.

## The Elaboration Likelihood Model

In summary, we have proposed that there are two basic routes to attitude change. One route—the central one—is taken when persuasion results from thinking about the issue or arguments under consideration. The other route—the peripheral one—results when persuasion results from non-issue-relevant con-

cerns such as impression management motives, the attractiveness of the message's source, or one's social role. Furthermore, if the new attitude results from effortful issue-relevant cognitive activity (central route), the new attitude is likely to be relatively enduring. But if the new attitude results from various persuasion cues in the situation (peripheral route), the attitude change is likely to exist only so long as the cues remain salient. Recent reviews of attitude change studies measuring persistence (Cook & Flay, 1978; Petty, 1977b) have supported the view that the active cognitive involvement of the person in the persuasion situation is crucial for the production of enduring attitude changes. In studies where issue-relevant cognitive activity was likely to be intense (e.g., role-playing studies, experiments employing personally relevant issues, etc.), the attitude changes produced have been found to be relatively enduring. On the other hand, in studies where issue-relevant cognitive activity was likely to be weak (e.g., experiments employing issues of little personal relevance), the initial attitude changes produced have been relatively short-lived.

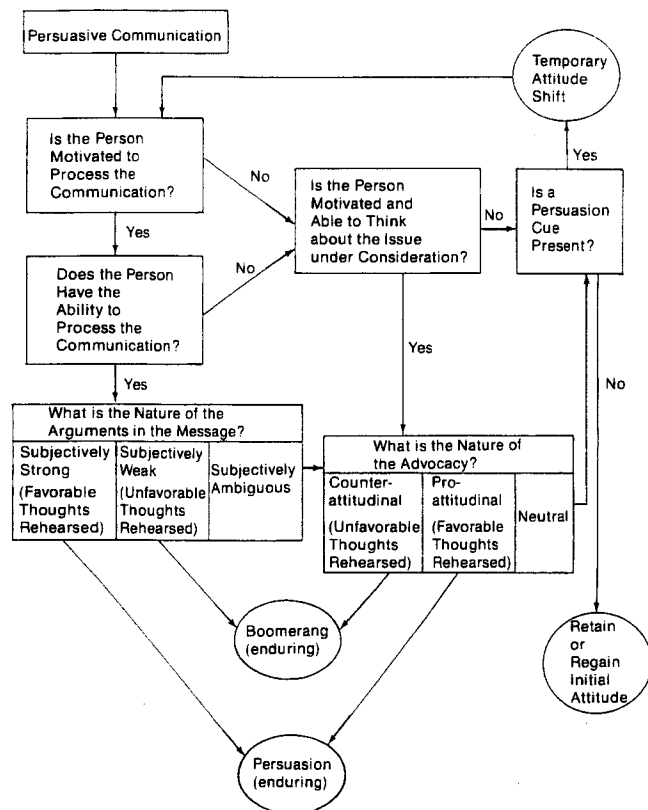
Enduring attitude change, then, appears to depend on the likelihood that an issue or argument will be elaborated upon (thought about). As we noted at the end of chapter 8, it doesn't make sense for a person to think carefully about every message received daily. Most of the messages that we receive, in fact, are on issues that are relatively trivial, and it is not worth our time and energy to scrutinize them carefully. In figure 9.3 we present an elaboration-likelihood model of attitude changes that result from exposure to persuasive communications. The model maps both the central and the peripheral routes to attitude change and thus specifies the manner in which enduring—rather than temporary—shifts are produced. In the remaining sections of this chapter, we focus on the components and implications of the elaboration-likelihood model.

## Motivation and Ability to Process the Message

As we have already noted, two factors will determine whether or not a person will think about a persuasive message—motivation and ability. We can begin our mapping, then, of the two routes to persuasion with the question: *Is the person motivated to process the communication?* People will not be motivated to think about every message they receive. For example, in chapter 8 we saw how people become less motivated to think about a message when many other people are also evaluating it (Petty, Harkins, & Williams, 1980). On the other hand, we saw how people become more motivated to think about a message that has high personal relevance (Petty & Cacioppo, 1979b). In this chapter, we saw that people could become more motivated to think about the content of a message if they were told that they were going to be subsequently interviewed about the issue (Chaiken, 1980). We also saw that people would sometimes be more motivated to think about incongruent than congruent information (Cacioppo & Petty, 1979b, 1980b; in press). In any case, there are many variables that can affect a person's motivation to elaborate upon the content of a message. For

**Figure 9.3**

The elaboration-likelihood model of attitude change.



example, in chapter 6 we saw that unexpected physiological feedback might enhance thinking about the stimulus associated with the arousal. Recipient variables, like a person's "need for cognition" (Cohen, 1957), probably affect the motivation to elaborate. If the person generates his or her own message, the amount of dissonance produced by the message should determine the person's motivation to think about the arguments he or she has generated (see chap. 5).

Motivation to think about a message is not sufficient for message elaboration to occur, however. The person must also have the ability to process the message. So assuming the motivation is present, our next question becomes: *Does the*

*person have the ability to process the communication?* As we have seen, many variables can affect elaboration ability. The more a message is repeated, for example, the greater the opportunity the person has to think about the message content (Cacioppo & Petty, 1979b; 1980a). The more distracted a person is, the less thinking about the message that can occur (Petty et al., 1976). Written messages provide people with a greater opportunity for elaboration than audio messages because people can process written messages at their own pace (Chaiken & Eagly, 1976; Wright, 1981). If the message is incomprehensible (Eagly, 1974) or if the person has no schema or framework for relating the message to his or her existing beliefs, then no processing can occur, even if sufficient motivation was present.

If both motivation and ability are present, then message elaboration will occur. The nature of that elaboration will be determined primarily by the subjective quality of the arguments presented in the communication, so our next question becomes: *What is the nature of the arguments in the message?* If the person perceives the message to contain strong, compelling arguments, then thinking about the arguments will cause favorable thoughts to be rehearsed—and enduring persuasion will result; but, if the person perceives the message to contain weak arguments, thinking about the arguments will cause counterarguments to be rehearsed, and it is possible for the person to move in a direction away from that advocated in the communication (boomerang). This is the central route to attitude change. According to the model, if a person is motivated and able to think about the message arguments, the following sequence of events will occur: *Attention, comprehension, elaboration, integration, then enduring attitude change.* The processes of attention and comprehension were emphasized in chapter 3, the process of elaboration (cognitive responses) in chapter 8, and the process of integration in chapter 7. In addition, the rationalizing process of dissonance reduction (described in chap. 5) can be viewed as an elaboration process producing an enduring attitude change (Collins & Hoyt, 1972).

## Motivation and Ability to Think about the Issue

Sometimes a person will be either unmotivated or unable to think about the persuasive message, and in these situations an important question becomes: *Is the person motivated and able to think about the issue under consideration?* For example, if the issue is very important to the person but the person doesn't understand the arguments being presented in the message, or if no arguments are actually presented, then elaboration of the arguments cannot occur. Attention and comprehension of the arguments are prerequisites for argument elaboration. Nevertheless, the person may still be able to think about the *issue*. In this case, instead of the person's thoughts being guided by the subjective quality of the arguments in the message, the person's thoughts will be guided by his or her preexisting attitude on the issue. If the attitude is positive, with further thought the person is likely to generate and rehearse favorable thoughts and adopt an

even more positive attitude. But if the attitude is negative, with further thought the person is likely to generate and rehearse unfavorable thoughts and adopt an even more negative attitude (Tesser, 1978). Thus, in these situations, the important question is: *What is the nature of the advocacy?* If the person's thoughts are guided by a preexisting attitude rather than by the arguments in the message, then it will appear that people are persuaded by proattitudinal messages but show resistance or boomerang to counterattitudinal messages. Thus, when a person is either not motivated or able to think about the arguments in a message but is motivated and able to think about the issue, the nature of a person's thoughts will be guided more by a preexisting attitude than by the nature of the arguments presented in the message. According to the elaboration-likelihood model, though, the attitude changes that result from issue elaboration will be just as enduring as those that result from message-argument elaboration.

There is another situation in which a person's thoughts will be guided more by an initial attitude than by the arguments presented. This occurs when a person is motivated and able to process the message arguments, but the arguments presented are neither subjectively strong nor weak. In this case, argument processing leads to no preponderance of favorable or unfavorable thoughts. Rather than remain in this ambiguous situation, we suggest that after an initial period of argument processing, the message recipient will begin to generate cognitions that are consistent with a prior attitude in an attempt to end the ambiguity. This will lead subjects to become more extreme in their own views when presented with ambiguous, inconclusive, or contradictory messages that they are attempting to process (Lord, Ross, & Lepper, 1979). Furthermore, this polarization is likely to be relatively enduring.

### The Central Route: A Difficult Way to Change Attitudes

Clearly, the elaboration-likelihood model indicates that it is quite difficult to produce an enduring attitude change by exposing people to a persuasive communication. The recipient of the message must have both the motivation and the ability to process the information contained in the communication, and the information presented must elicit favorable cognitive responses that are rehearsed and stored in long-term memory. Favorable cognitive responses will be elicited only if the message recipient finds the message arguments to be compelling. In experimental work on the basic persuasion process, it is fairly easy to construct highly persuasive arguments by fabricating information (e.g., "Long term studies at Yale medical school show that people who sleep 6 hours per night live 4.2 years longer than people who sleep 8 to 9"). In the real world, the problem of constructing a highly persuasive message is much more difficult. If the arguments you construct turn out not to be compelling, people may counterargue your message; or if the arguments are compelling—but too complex to be understood fully—people's thoughts will be guided by their preexisting attitudes (which may be antagonistic) rather than by your arguments. In many cases, however, the

problem is even more basic—just motivating people to attend to and think about what you have to say! It's no wonder that, given the difficulty of the central route to persuasion, the peripheral route is often tried.

### The Peripheral Route: Attitude Change without Issue-relevant Thinking

We have seen, in several chapters of this text, how attitudes can be changed by peripheral means. The most obvious peripheral route is to associate the advocated position with other things that your target already feels positively towards, like food or money (see chap. 2). Or you might associate the advocated position with an expert, an attractive, or a powerful source (see chap. 3). Or you might present your advocacy after you have presented several other irrelevant advocacies that your subject truly despises. In comparison, the crucial advocacy might not seem so bad (this is the contrast effect discussed in chap. 4). Although all of these techniques have been successful in producing attitude changes, the elaboration-likelihood model suggests that all of these changes will not be very permanent. Furthermore, these techniques are not likely to be very successful in changing people's attitudes when they have a lot of prior information about the issue or if the issue is very involving to them. When people have a lot of prior information about an issue and the issue has personal relevance, they will be motivated to process the issue-relevant information presented, and peripheral aspects of the persuasion situation will be less important.

In many "real world" instances, however, people are not interested in changing our attitudes about such involving issues. They are interested in getting us to like Brand X more than Brand Y, or they want us to like Candidate A more than Candidate B. For example, if we don't have very much prior information about these issues, or if we don't perceive the issues to have very much personal relevance, then the peripheral approach will probably have some success. The success will be short-lived, however, so it will be necessary for the person who is trying to persuade us to constantly remind us of the persuasion cue (reward, attractive source, contextual stimuli) that accompanies the attitude object. These constant reminders may be sufficient to get us to buy certain products or vote for certain candidates. Ironically, once we have made a decision and bought Brand Y or voted for Candidate A, because of the dissonance associated with the choice (see chap. 5) we may then become motivated to think about the product or candidate and generate bolstering cognitions that *then* produce a more permanent change in attitude. Or because we now own the product or feel responsible for the candidate, we may now be motivated to process any subsequent information that we receive about the product and candidate. This, of course, can lead to permanent attitude changes. What begins, then, as a temporary attitude change via the peripheral route, may end up being a more permanent change via the central route.

In practical terms, the model suggests that when a person seeks to change another person's attitudes, the *elaboration likelihood* of the persuasion situation should be assessed (i.e., how likely is it that the other person will be motivated and able to think about the message?). If elaboration likelihood is high, and if there are compelling arguments to present, the central route may be the best strategy to pursue. This is the most ideal strategy, because a relatively permanent change in attitudes will be produced. On the other hand, if the only arguments available are weak, or if elaboration likelihood is low, then the peripheral route will be a more promising strategy.

## Retrospective

In this chapter we have suggested that all of the approaches to attitude change discussed in chapters 2–8 of this text can be represented as two distinct routes to persuasion. An elaboration-likelihood model was presented that mapped the two routes, with the *central route* emphasizing a thoughtful consideration of issue-relevant argumentation and the *peripheral route* emphasizing the importance of issue-irrelevant cues. The accumulated literature on persuasion suggests that changes induced via the central route tend to endure, but changes induced via the peripheral tend to decay unless the new attitude is subsequently bolstered by issue-relevant thought.

## Notes

<sup>1</sup>Kelman (1961) was one of the first modern social psychologists to propose—and provide evidence for—the view that there were different “kinds” of attitude change (recall from chap. 1 that Aristotle also believed that there were different kinds of persuasion). In Kelman's framework, the kind of persuasion was tied to the source of the message. *Internalization* resulted from accepting information from expert sources. This kind of attitude change was thought to be relatively enduring because it resulted from integrating new information into one's cognitive system. *Identification* was an attitude change produced when a person felt some bond with an attractive or likable source, and this attitude change persisted only so long as the attractive source was still salient. Finally, *compliance* was an attitude change produced by a powerful source. This change persisted only so long as the source retained control over the message recipient in the form of administering rewards and punishments. Also, it was necessary for the powerful source to be able to monitor the recipient's attitudes. Internalization would fall under the central route to persuasion if the person changed because of the *information* provided by the source. If the person changed simply because an expert said so, the change would be peripheral. Identification and compliance would fall under the peripheral route.

<sup>2</sup>The distinction that we have made between the central and peripheral routes to attitude change has much in common with the distinctions between “deep” vs. “shallow” processing (Craik & Lockhart, 1972), “controlled” vs. “automatic” processing (Schneider & Shiffrin, 1977); “systematic” vs. “heuristic” processing (Chaiken,

1980); and “thoughtful” vs. “scripted” or “mindless” processing (Abelson, 1976; Langer, Blank, & Chanowitz, 1978). We prefer the present terms as being more descriptive and more encompassing than others (i.e., is the attitude change the result of something central to the issue or peripheral to the issue?). For more details, see Petty and Cacioppo, in press.

<sup>3</sup>If a persuasive message is then actually presented to these subjects after the forewarning, greater persuasion results than for an unwarned group if the message is on a topic of low personal relevance, but less persuasion results than for an unwarned group if the message is on a topic of high personal relevance (Apsler & Sears, 1968).